

**Texas General Land Office/Minerals Management Service
8(g) Gas Royalty In-Kind Pilot**

A Report

Analysis Period – June 1999 through December 2000

The Texas General Land Office/Minerals Management Service

8 (g) Gas Royalty In-Kind Pilot

A Report

The purpose of this report is to review the effectiveness of the gas royalty-in-kind (RIK) pilot program undertaken by the Minerals Management Service (MMS) and the State of Texas. This report covers the 19-month time period from June 1999 through December 2000.

Executive Summary

The RIK pilot undertaken jointly by the State of Texas General Land Office (TGLO) and the Department of the Interior's Minerals Management Service, began in June 1999. The pilot included thirteen of the forty leases offshore Texas that are subject to section 8(g) of the OCS Lands Act. These leases were split into two packages – the Blessing and the Matagorda Offshore Pipeline System (MOPS) – for purposes of gas sales. A total of 28,565,503 MMBtu of RIK gas was sold during the pilot. The total value of all RIK gas sold was \$99,620,227.

The economic analysis of the 8(g) pilot consisted of two separate methodologies. The first compared the RIK values with published indices. The indices selected for this comparison were indicative of the index values available for gas sold at the same points as the Government sold the RIK gas. The second compared the RIK values with the unaudited royalty values received by the MMS for leases located in the same geographic area as the RIK pilot leases. The comparison with the adjacent in-value leases serves only as a general benchmark; the values reported on these leases may differ from the RIK sales values for a variety of reasons, such as smaller production volumes from the in-value leases and possible differences in the way in which the production was sold.

The economic comparison results consistently exhibit a marginal uplift for the RIK values. A summary of the comparisons between the RIK values and the index values for both packages indicates that RIK exceeded the index by \$662,294. For all Blessing base load sales, the RIK value exceeds the index value by \$313,934 (0.41 per cent); while for the MOPS package base load sales, the RIK value exceeds the index value by \$177,640 (2.24 per cent). For the Blessing package swing sales, the RIK exceeds the index by \$170,720 (1.10 per cent). There were no swing sales for the MOPS package. The summary comparison of the RIK values to values reported for similarly situated in-value leases, indicates that the RIK values exceed the in-value receipts by \$997,529. For all Blessing package sales (base load and swing), RIK sales exceed in-value sales by \$906,635 (0.99 per cent). Unusual volatility in the natural gas market in December of 2000 greatly impacted this amount. For the MOPS package sales, the received RIK values exceed the in value potential revenue - using monthly volume weight average prices - by \$90,894 (1.15 per cent).

MMS concludes from this analysis that, in general, RIK natural gas sold at robust market centers under industry standard contract terms will receive generally the same price as any other gas sold at the same market centers. MMS does not expect to systematically do any better or worse than any other party selling gas in this manner. Since these sales will be more or less revenue neutral, compared to revenues collected in value, any net revenue impacts will arise from the cost of getting the RIK gas to the market center for sale.

The MMS achieved savings related to transportation costs for the MOPS leases. The RIK volumes from the five MOPS leases were aggregated with other Federal volumes moving on the MOPS pipeline. The MMS negotiated a transportation rate that was significantly less than that historically claimed by payors under the in-value regulations. For the last 5 months of the pilot, the savings were approximately \$18,000 per month.

The Texas 8(g) pilot provided the MMS with knowledge that the MMS needed as it expanded the RIK program across the Gulf of Mexico for both gas and oil. The main lessons of the pilot are:

Understand Your Market

Prior to the commencement of sales, significant effort must be expended to develop an understanding of the market specific to the leases from which gas is going to be taken in kind. Areas requiring knowledge include; volumes, gas quality, pipeline rates/infrastructure, market(s) served, processing options, sales seasonality, and relevant published indices.

The Need for Competition

MMS recognized the benefits of having a diverse population of purchasers. The MMS also developed an understanding of the benefits of selling the RIK gas in smaller, yet commercially viable, bundles to multiple successful purchasers on any one pipeline system or at any given delivery point.

Develop Invoicing and Volume Balancing Procedures

Prior to the pilot, the MMS sought to understand the back office accounting processes necessary to assure the correct billing, payment, and distribution of RIK monies. The MMS invested significant effort in learning the diverse aspects of in kind gas accounting from both the State of Texas General Land Office and their industry counterparts in the contracting, marketing, and accounting areas.

Aggregate Volumes to Achieve Transportation Savings

As an owner of significant gas volumes spread across every leasehold, and in situations where there is competition for the transportation of RIK gas away from the lease, the government can benefit by negotiating for its own transportation. If the gas is “captive” to only one pipeline, it makes more economic sense to invoke the lease language that requires delivery of the gas by the lease operator at a point specified by MMS.

Sell the RIK Gas at the Most Economical Delivery Point

Bids may be received for the gas using different custody transfer locations (offshore, pipeline interconnect, plant tailgate, etc.). Before awarding a contract, the MMS

performs a cost benefit analysis for location and movement costs as a basis for comparing bids that use different custody transfer locations.

Perfecting the Sales Contract (GISB)

Through a series of iterative efforts, the MMS was able to develop an RIK sales contract using the Gas Industry Standards Board (GISB) contract routinely used by industry but modified for MMS needs.

Pre-RIK Conversion Economic Analysis

The cost savings potential on the transportation network available for the RIK production is one key factor considered when analyzing whether to convert a property to RIK. Other factors include; the ownership of the pipelines – producer-owned pipes or third party ownership; the possibility for a processing uplift or receiving better bids due to gas quality; and the ability to sell the gas into competing markets.

In general, taking natural gas royalties in kind makes sense when one or more of the following conditions apply:

- There is ample competition among buyers of RIK gas.
- The gas can be sold at multiple market centers or at a market center serving multiple pipelines.
- The MMS is able to negotiate transportation or gas processing rates for RIK volumes that are less than those paid and deducted from in-value royalties by lessees.

Conversely, it generally does not make sense to take natural gas royalties in kind where a property is captive to a single market or pipeline; where there are no opportunities to achieve transportation or processing savings; or where a lessee is paying royalties at a value significantly above what MMS would likely receive for selling the gas at a market center.

MMS cannot draw any conclusions about the effect on its administrative costs at this time. There appear to be benefits from simplified reporting and from the reduction in audits and associated appeals and litigation related to valuation issues. In addition, MMS generally receives payment about 5 days sooner under RIK than when royalties are paid in value. However, MMS performs functions for RIK that it wouldn't otherwise perform, such as the preparation and conduct of gas sales and settling imbalances. MMS is still developing its RIK processes, and reengineered processes for royalties paid in value are just being put into place. For these reasons, MMS cannot quantify the relative costs of these processes at this time.

Background

In 1997, the Minerals Management Service (MMS) published the Royalty-In-Kind Feasibility Study. The last paragraph of the Executive Summary (Attachment 1) states:

Similarly, the State of Texas has expressed a significant amount of interest in an RIK program for the Outer Continental Shelf (OCS) 8(g) leases offshore from the State. **Consequently, because the potential for a successful OCS gas RIK program appears to be high, we recommend that MMS and Texas jointly explore the possibilities of RIK programs involving these properties.**

In October 1998, two MMS groups – Procurement and Support Services Division and the Office of Policy and Management Improvement – began a series of meetings with the State of Texas’ General Land Office (TGLO). These meetings resulted in a pilot program to take Gulf of Mexico natural gas royalties from Federal leases in the 8(g) zone offshore Texas as a share of production. Leases issued by the United States pursuant to section 8(g) of the Outer Continental Shelf Lands Act are oil and gas leases within three miles of State waters (hereafter referred to as 8(g) leases). The States are entitled to 27 per cent of the revenues from these leases. The TGLO and the Minerals Management Service, Department of the Interior, entered into a Cooperative Agreement (Attachment 2). The goal of the Cooperative Agreement was to mutually explore ways to cost-effectively market gas from the Federal 8(g) zone and State waters. The TGLO already had a program in place taking the Texas State-owned production in kind and using it in state facilities. As such, Texas was in a position to mentor the MMS so that MMS could develop the business processes from the Federal standpoint. The inclusion of Federal 8(g) gas volumes with the Texas State volumes provided great potential.

Between October 1998 and June 1999, the MMS, in conjunction with the State, identified and developed the necessary documents to establish the Texas 8(g) pilot. The MMS also met with numerous industry representatives during this time. The MMS obtained significant knowledge related to contracts, bidder qualification, producer and purchaser practices, upstream scenarios, and the marketer’s relationships, role, and responsibilities. Additionally, the MMS undertook an analysis of the entire Texas 8(g) lease universe of approximately forty properties in order to identify those properties that could benefit MMS and the State the most under an RIK program. The analysis investigated the volumes, markets, pipelines, transportation rates, and market centers appropriate for each lease. The MMS next placed the leases into eight logical groupings. Five of the eight groups were eliminated from consideration. Primary reasons for elimination were insufficient volumes, lack of pipeline optionality¹, and the lack of potential for increasing value by taking the gas in kind. Additionally, some leases were eliminated because the in-value royalties were significantly greater than the potential in-kind royalties.

The three remaining groups that became the pilot properties, involved leases that flowed through the Matagorda Offshore Pipeline System (MOPS), leases that flowed to the Matagorda Gas Plant located in Blessing County, Texas, and leases that flowed on the

¹ “Pipeline optionality” means the availability of more than one pipeline to move gas away from the lease.

Central Texas Gathering System (CTGS). The first two of these groups formed the basis for the Texas 8(g) pilot program. The specific leases, blocks, and transportation systems are identified in the **Texas RIK Properties** section of this document.

RIK gas from the CTGS leases was sold under a negotiated agreement –not competitive bidding - to the General Services Administration for use in government facilities. This program ran from December 1998 through November 2000. In December 2000, RIK gas on the CTGS system was included in the larger GOM RIK pilot. The CTGS RIK program and the General Services Administration’s sales will be included in the evaluation of the other RIK efforts offshore Texas and Louisiana that form the basis for the current MMS gas RIK program.

The MMS also worked with several industry groups. This coordination resulted in a straightforward “Dear Operator” letter that had the effect of making the MMS’ relationship under the RIK scheme similar to that of a typical working interest owner.

In the spring of 1999, the MMS assigned a permanent employee to work on site in the TGLO offices in Austin. The TGLO and MMS jointly conducted the June 1999 and subsequent sales. This relationship continued until April 2000. The MMS recognized that increasing the RIK volumes by adding non-8 (g) leases to the pilot program would provide certain economies of scale. Using the invaluable knowledge gained from the partnership with the TGLO, the MMS consolidated the pilot leases into the larger Gulf of Mexico pilot and moved the administration of the RIK program to Denver.

The first RIK gas from the MOPS and Blessing leases was taken for the production month of June 1999. During June and July 1999, production was taken from only two leases. More leases were added in August and September. By October 1999, RIK gas was being taken from eleven leases at the rate of approximately 65,000 MMBtu per day.

Criteria Used In Deciding If A Property Should Be Converted To RIK

Beginning with the 8(g) RIK gas pilot, the MMS began accumulating knowledge that assists in answering the question – Is this lease (or group of leases) a good candidate for conversion to royalty in kind? Although there is no specific volume threshold, the MMS has recognized that packages generally need to be greater than 10,000dth² in order to be commercially attractive to purchasers. Some of the other situations that need to be researched when investigating the viability of conversion to RIK are described below.

Stranded Leases

Some leases are captive to a single market or pipeline. If the entire production flows on a pipeline to a single end use point (e.g. a chemical plant or power generation facility), and the facility has contracted all volumes, then the RIK share has no alternatives for flow or market. This situation does not lend itself to RIK.

² A decatherm (dth) is a measure of the heating value of gas equal to 1,000 cubic feet (1 Mcf) of gas at a Btu quality of 1,000 Btu/cubic foot (1 MMBtu).

No Transportation Savings Potential

There are situations where the existing producers have a contracted transportation rate that is lower than the MMS could negotiate even if it could aggregate its RIK volumes. The producers have entered into “life-of-the-reserves” contracts. They have dedicated all production from the leases to being transported on the connecting pipeline. The pipelines gain stability from such agreements and the producers gain reduced rates. The pipelines have no economic interest in negotiating a lower rate for the RIK production. In fact, they will generally expect higher rates than what are being claimed under the in-value regulations. In such situations, it is unlikely that MMS could offset higher transportation costs by receiving a higher sales price for the gas, and net revenues to the Treasury would likely decrease.

A Change In The Availability Of Pipeline/Processing Capacity

The MMS has found situations where at the time the pipeline was built, capacity was at a premium, and higher rates were locked in. However, as production decreases over time, more capacity becomes available. When there are movement alternatives for the RIK gas, the ability to negotiate a reduced rate exists. The pipeline wants to keep its line flowing at as close to capacity as possible and may reduce transportation rates to achieve this goal. A similar situation may be seen regarding the processing rates available at a gas processing plant. In order to maintain throughput, the plant may negotiate reduced processing rates for gas that has alternative processing capability. In such situations, MMS could reduce the cost of delivering the gas to the sales point, and thus could enhance net revenues to the Treasury.³

Corporate Economics

There are situations where affiliates of the same corporate entity own all or part of the interest in the lease, pipeline, and processing plant. When this occurs, a reduction for one of the services provided (pipeline transportation or plant processing) may be negotiated recognizing that the overall benefits to the corporation are enhanced by providing a reduced rate for one of the corporation’s services.

Texas RIK Properties

The Texas RIK pilot involved as many as 13 properties. During the period of analysis of this report, production flowed continuously from 11 of the 13 leases. One lease was included on some invoices as a participant in a unitization agreement. One property moved from a compensatory royalty to a producing lease status. The lease numbers, area and block designations, and pipelines/delivery points are as follows.

<u>Lease</u>	<u>Area/Block</u>	<u>Pipeline/Delivery Point</u>
0540030880	MI 623	Blessing/Seagull
0540030910	MI 632	MOPS/Tivoli
0540030960	MI 656	MOPS/Tivoli
0540041390	MI 657	MOPS/Tivoli

³Companies paying royalties in value are allowed to deduct the actual and reasonable costs of transportation and processing natural gas in determining their royalty payments.

0540047040	MI 696	MOPS/Tivoli
0540050000	MI 622	Blessing/Seagull
0540051690	MI 518	Blessing/Cavallo
0540060320	MI 519	Blessing/Cavallo
0540060420	MI 633	Blessing/Seagull
0540060430	MI 635	Blessing/Seagull
0540072020	MI 634	Blessing/Seagull
0540137680	MI 636	Blessing/Seagull
0540147920	MI 631	MOPS/Tivoli

During the course of the pilot, the MMS recognized that the leases flowing on the MOPS system provided an increased revenue opportunity. This was due to two factors: flexibility in both the market center and in transport ownership. There were competing markets at the Tivoli Gas Plant - the Texas intrastate market, and the interstate market (Florida Zone 1). The MMS received increased value when the energy marketing companies moved base loads of gas between these two profit centers. Additionally, the MMS recognized that two pipeline companies (Southern Natural Gas and Northern Natural Gas (NNG)) owned the platform-to-beach transportation capacity on the MOPS system and were in direct competition. By adding additional non-8 (g) volumes, the MMS RIK volume would be the largest, singly-controlled volume on the system. MMS leveraged their “largest producer” status and negotiated reduced rates within their own transportation agreements. The new methodology involved several more operators and a NNG transportation contract. Operators were directed to deliver the gas to the nearest NNG interconnect; and MMS paid contracted transport charges from the interconnect to onshore. Onshore, NNG serves both the interstate and Texas intrastate markets. Energy marketing firms pay a premium for this versatility. By adding a transport contract into the RIK gas program, MMS received a value greater than what would have been realized at a wellhead sale. In addition, the option to create our own transport agreement vs. riding each operator’s contract onshore, greatly simplified our accounting and pipeline imbalance processes.

Conversely, the RIK gas from the Blessing leases flows into a competing market (5 take-away pipes at the tailgate of Matagorda Gas Plant). Value was received from energy marketing firms who move the gas at their discretion between these multiple profit centers. The leases, however, are captive to one platform-to-beach transport owner (El Paso). The MMS determined that the Blessing gas is sold in a viable market because of the competition, however, no transportation savings could be realized on the Blessing/Seagull/Cavallo system.

An effective and efficient RIK program depends on learning and understanding each lease/pipeline grouping and making the best decision based on that knowledge. The differences between the two original pilot groups provided one of the significant pilot lessons learned - opportunity for RIK revenue enhancement exists at each function where competition exists. A focus on competition for transportation may be more lucrative than competing for additional commodity value. The MMS recognized, where feasible, that it would be beneficial - both economically and administratively – to aggregate all Federal

volumes on the system and contract for transportation. Additional analysis of the MOPS transportation costs is outlined in the MOPS Transportation – In Value Claimed v. Contracted by MMS section of this document.

After the MOPS gas had its own transportation agreement, it became administratively and economically imprudent to modify our agent authority to a new successful bidder on a monthly basis. The RIK sales contract schedule for the MOPS leases was changed from monthly to two contract periods per year. The periods are one five-month contract for the months November through March (the heating season) and a second seven-month contract for the months April through October (the cooling season). Currently, bids may also be submitted for a one-year contract. In August 2000, the five pilot MOPS leases were combined with approximately 25 other properties and are now under a separate accounting scheme and are not included in the scope of this analysis.

Physical Locations and Production Movement

The production from the eight most easterly leases comes onshore at the Oyster Lake separation facility and then moves to the Matagorda Gas Plant located in Blessing County, Texas. Most of the production moves through the Seagull Shoreline system, however the production from the most northeastern leases moves through the Cavallo system. The primary market for the Blessing gas is electricity generation that supports the air conditioning need for metropolitan Houston. Several movement options exist at the tailgate of the Matagorda Gas Plant. Gas can move through either the Channel or Houston Pipeline (HPL) Texas intrastate lines. Additionally, the gas may move on the Tennessee, PG&E, Dow, Transco, or TETCO interstate lines.

The five westerly leases represent the MOPS gas. Gas moving through the MOPS system is processed at the Tivoli Gas Plant located in Refugio County, Texas. ExxonMobil was transporting the gas on MMS's behalf through the NNG capacity. The primary market for the MOPS gas is Florida Gas Transmission, however, if there is greater value, the gas can be easily diverted to metropolitan Houston. The take away options from Tivoli Gas Plant are Mid Con, Tejas, Channel, NGPL, Koch, and Florida pipelines.

Attachment 3 provides an illustration of the leases involved in the Texas GLO RIK pilot. The leases marked with a **B** are the leases that flow to the Matagorda Gas Plant at Blessing. The leases marked with an **M** are the leases that flow through the MOPS System.

Markets and Published Indices

The predominant index used to value the Blessing gas is the index published for the market center designated as the Houston Ship Channel (HSC). HSC is a Texas intrastate index. HSC is more a financial market than a physical market. A true physical market index point for the 8(g) gas would be the Tennessee South – Corpus Christi index. A negative location differential exists between the tailgate of the Matagorda Gas Plant in

Blessing County (Blessing) and the HSC index. Blessing, Texas is located approximately 70 miles from Houston; the cost of moving the gas from Blessing to metro Houston is called a location differential. The market served is primarily the Houston metropolitan area. The major demand occurs in the summer (the cooling season) due to the increase in air conditioning. There is greater demand on the intrastate pipes (HPL and Channel) during the cooling season than on the interstate pipes flowing to the northeast United States. HPL and Channel commonly make monthly term contracts so the rates and prices are very market sensitive. When the demand for gas in Houston increases during the summer, the toll (transportation rate/location differential) to get on the intrastate pipes increases therefore, the differential between HSC and Blessing is somewhat higher in the summer. The other intrastate pipes exhibit the same characteristics. However, at other times of the year the differential can be affected by the needs of users downstream of the HSC market. For example, if all of the Louisiana gas is moving to the northeastern region of the U.S. for heat generation and more is needed, then Texas gas will be drawn in that direction.

The HSC index is a valid valuation point for the gas sold in the RIK pilot. The HSC index was compared to the more commonly referenced Henry Hub index. The two indices have a correlation of 99.98%. Over the 19-month report period, the difference between the two indices never varied by more than 4 cents. The difference (Henry Hub minus HSC) was positive in some months, negative in others and zero in others. Generally, HSC is greater than Henry Hub during the summer months and Henry Hub is greater than HSC in the winter months. Attachment 4 graphically illustrates the comparison of the HSC and Henry Hub indices.

In performing the economic analysis for the MOPS package, the MMS elected to calculate an average of the three appropriate indices. These indices (all published in *Inside FERC*) are; Florida Gas Transmission Zone 1 (FGT Z1), Koch (TX), and NGPL (S.TX). The FGT Z1 is the westernmost interconnect on the FGT system and is generally higher than the other indices. Florida Gas Transmission expects higher bid prices on its system since once gas is flowing on the FGT system to Florida, it will not be subject to capacity constraints further down the line. The FGT market is generally stronger than the Texas intrastate market because the cooling season is longer in Florida than in Texas. However, if Texas is experiencing a very hot period, gas is easily diverted to capture the potential profit of the “hot” Texas market.

Transportation Costs

Lease terms permit the Department of the Interior to designate the delivery point for the gas taken in kind. During the initial phase of the pilot, the Department consulted with the producers regarding the best method of having the RIK gas delivered to the tailgate of the appropriate gas plant where it would be delivered to the trader/ purchaser. The Department decided to “ride” on the producer’s existing transportation contracts. Or in other words, designate the delivery point as the tailgate of the appropriate gas plant. The companies producing the RIK gas are allowed to deduct the costs of moving the production from the lease to the delivery point. These producers deduct these costs from

the royalties due in value on other federal leases they operate. The cost of transporting the gas from the tailgate of the plant to the Houston use area contains two components; a fuel cost (2-3%), and a transportation rate. The sum of these two components is approximately \$0.07/MMBtu. The current transportation/location differential between HSC and the RIK delivery point is a component in the bids received from marketing companies since they negotiate the monthly transport contracts on Texas intrastate pipelines.

Texas RIK Sales

The RIK sales in the pilot were conducted on a monthly cycle. Before companies were permitted to bid on RIK gas two prerequisites had to be met: 1) companies had to be pre-qualified – certain financial requirements outlined on the MMS website had to be met; and 2) experience in scheduling and moving gas had to be demonstrated. Additionally, a standard Gas Industry Standards Board (GISB) contract with Special Provisions specific to the Texas RIK gas had to be executed. The special provisions involved indemnification, which court of law had jurisdiction, and force majeure. Approximately 20 traders/purchasers qualified to bid on Texas RIK gas.

Eight days prior to the sale, the operator provided the MMS their forward view of our daily-entitled volumes. This number was transferred to our Invitation for Offer and formed the basis of our gas available for sale.

The day before the sale - which generally occurred on the 4th working day before the end of the month - the MMS would notify eligible bidders. MMS would fax an Invitation for Offers (IFO) outlining the list of properties, the available volumes, and the available takeaway pipelines. The MMS also called all qualified bidders at this time to determine their portfolio for the month. The MMS would obtain insight into the next month's market and which companies might or might not be bidding on the RIK gas.

On the day of the sale, MMS would receive the bid sheets via fax, then transfer all information to a summary sheet. The bids may be represented in more than one index format, for example FGT flat from Company A and HSC minus \$0.035 from Company B. The MMS would prepare basis charts normalizing the difference between different index points. These charts were used to determine the best price among the bids received. In the case of equal bids, companies were permitted to refresh their bids. Often packages would be subdivided and sold to separate bidders because no one bidder would desire the full 65,000 MMBtu/day as a single package. Winners would be selected from the most aggressive bid/requested volume to the least aggressive bid until all the gas was placed. In order to assure a good bidder pool for future sales, the MMS attempted to maintain a diversified winning bidder list. For example, one company was consistently an aggressive bidder. They would bid on 100% of the gas volumes to keep other marketing companies out of the downstream Houston market. If other bidders offered the same price, but requested smaller volumes, we would award the multiple packages. Emphasis was placed on receiving the highest value, but not on placing 100% of the volumes with one bidder.

The MMS consummated the gas sale by providing the winning bidder with a purchase confirmation notice. The purchase confirmation notice is a requirement of the GISB. It outlines the service (base load or swing), the term, the delivery point, and the volume per day. Following the selection of the winning bidder, the losing bidders were contacted and informed of the winning bid. Companies could calculate how far “out of the market” they were and could obtain a sense of how aggressive they needed to become in order to be a winner in the next cycle.

During the month, the MMS monitored nominations. The producer (scheduler) would notify the MMS (marketer) of the volumes available for the next day’s business. If the volumes were different than the previous day’s volume, the MMS would notify the purchaser.

The RIK gas pricing mechanism evolved over the pilot period. Initially, the gas was sold at one price for the entire volume delivered to the purchaser. Beginning in November 1999, the MMS began contracting for two bundles of RIK gas for the Blessing package. The first of these bundles was a daily delivered volume – a “base load,” volume. The second bundle was for a variable volume of gas that could be adjusted as frequently as daily – a “swing” volume. There are several advantages to selling some gas as base load and some gas on a swing basis. The gas sold as base load guarantees specific revenues based on a first-of-month price. The gas sold on a swing basis, at a daily price, allows for frequent adjustments in delivery volumes in order to avoid significant under or over pipeline delivery imbalances. Over- or under-delivered volumes are normally “cashed out” at the end of the month. The cash out value was based on the Tennessee Zone 0 first-of-month price which is common industry practice for this area.

Prior to August 2000, the production points for the MOPS RIK pilot leases were fairly stable – that is the gas volumes available for sale were reasonably constant – so all gas was sold as base load. The stability could not be guaranteed when the number of leases increased in August 2000. Currently MOPS gas is sold as two components – base load and swing.

A company’s portfolio is a significant factor on the volume and location they will bid. In reviewing the bids, MMS would contact the trader/purchaser and inquire regarding their interest in the RIK gas. For example, if a company’s downstream market is on TETCO, then they would bid the gas on a TETCO index and move it into the TETCO interconnect at the tailgate of the Blessing plant. The company would not bid on MOPS gas, as they had no portfolio for the gas at the tailgate of the Tivoli plant. Primarily, small to mid-sized purchasers look at their “needs”. They will bid on gas at points where they can use the gas. Just being able to purchase gas at a point for a good price is not reason enough to bid on the gas. Except for the larger purchasers, purchasers generally don’t have a need for gas at every market center. Other companies – for example, Tejas Marketing - may only be interested in gas that can flow into a specific – Tejas – line. Therefore, they would always place a bid for the gas on one system – MOPS - but never for the gas on the other system - Blessing.

During the period of this study, both the Blessing and MOPS gas was sold on 30-day contracts. This was primarily because the operator would schedule and nominate on our behalf. Currently, the MMS sells the RIK gas from the Blessing and MOPS leases under term contracts. Under a term contract, the purchaser does the scheduling and nominations, and the relationship moves from a “three way conversation” (MMS, operator, purchaser) to a “two way conversation” (MMS, purchaser). There is an administrative gain to a term contract. The current term contracts are for two periods annually. One contract runs from November through March, the other for the 7-month period from April through October. These periods correspond to the heating and cooling seasons and are typical for the industry.

Daily/Monthly Monitoring Activities

Monitoring activities assure the proper payment is received for the RIK volumes. A two-pronged effort accomplishes this task. The first calculates the value and tracks receipt of payment for the RIK production. The second verifies the RIK volumes for which payment is received.

The routine monthly cycle for the Texas RIK pilot leases entails the following steps:

- Invoicing
- Payment Receipt
- Allocation of Payment
- Royalty Report (2014) Preparation
- Distribution of Funds
- Preparation of Interest Bills (As Necessary)

During the pilot period, for the Blessing leases, the invoice bills for the base load portion of the RIK gas were generally prepared and mailed by the tenth day following the month of production with payment due 15 days later. The swing volumes were invoiced upon receipt of the pipeline statements that were due by the 25th day of the month following production. For the MOPS leases, the invoice was prepared on or about the 15th day of the following month, with payment due within 20 days. Currently, the invoicing and payment procedures have been standardized. The invoices are sent on or about the 15th day of the following month and payment is due within 10 days.

Purchasers of RIK gas submit payment using unique payor identifiers. Upon payment receipt, the MMS prepares the documentation necessary for the accounting function. This process significantly reduces the burden on industry. The last five steps outlined above are approximately 80 per cent complete within 30 days after billing. Additionally, the problems with the remaining 20 per cent have been identified. Within 60 days, the completion rate increases to over 95 per cent. MMS personnel estimate that it takes approximately one-third of each of two persons’ time to accomplish these tasks for the 8(g) RIK pilot properties.

As part of the gas balancing process, the MMS also assures that the delivered volumes match the reported entitled and sold volumes. The MMS employees responsible for the above monitoring activities also performed this function for the pilot period. Any, potential improvements related to the capabilities of the new MMS automated system are unknown at this time.

Economic Analyses

For the Texas 8(g) RIK Pilot, two economic analyses were performed. The analyses can be generally characterized as 1) an RIK to adjacent in-value leases comparison; and 2) an RIK to the average of the appropriate index values comparison. However, as stated previously, a majority of the Blessing package was sold as base load, with the remainder being sold as swing. For purposes of accurate comparisons, separate comparisons were made for the base load and swing volumes. These comparisons are discussed in detail below. A additional analysis of the potential savings achieved by aggregating leases in the MOPS package and contracting for transportation was also completed.

An RIK contract price was calculated using the invoice records for all RIK pilot leases. Volume-weighted average prices were calculated for each pilot lease for each pilot month.

To determine an adjacent in-value price, MMS selected twenty-five leases based upon their geographic proximity and their market comparability to the RIK pilot leases –(see Attachment 3). The MMS queried the Auditing and Financial System (unaudited 2014 data) for the appropriate in-value royalty payments for these leases. The leases selected generally had lower volumes than the RIK leases. Seven of the selected properties were not producing during the pilot timeframe. We compiled 19-months of gas (processed and unprocessed) in-value royalty data. The majority of the gas was reported as unprocessed. MMS calculated a monthly volume-weighted average in-value price with no deductions for transportation – an onshore price – for each lease. This methodology provided the best available comparison considering the level of detail in the reported royalty data used in the economic analysis. Through audit experience and general contact with royalty payors, MMS concludes that this in-value lease’s weighted-average price includes sales of both base load and swing volumes with contract terms referencing both first-of-month and daily prices. The MMS has no data available to determine the type of sale or the valuation criteria for the in-value lease reported royalties.

First-of-month and daily average index prices were gathered from publications for the appropriate index points. The values received for the in-kind leases were compared to the average of the appropriate publicly available indices⁴. For the MOPS leases, the appropriate indices were determined to be the first of month (FOM) indices published in *Inside FERC’s Gas Market Report* for the Florida Gas Transmission Zone 1 (FGT Z1), the Koch (TX), and the Natural Gas Pipeline Company (S.TX) index points. Two

⁴ The MMS elected to compare to an average of the indices available to sellers and purchasers at the same market center at which MMS was selling its gas in kind. The MMS doesn’t know the actual volumes sold at any given index, therefore, using a simple – rather than a weighted - average was the only possibility.

analyses were performed for the Blessing RIK gas because, beginning in November 1999, the Blessing RIK gas was sold on a base load and swing basis. For the Blessing base load sales, an average of the *Inside FERC's* FOM indices for Tennessee Zone 0 and Transco (Zone 1) were used. For the Blessing swing sales, the daily midpoint price for Tennessee South – Corpus Christi from *Platts Gas Daily* was used. This daily mid-point price is the price index commonly used by pipelines to cash out imbalance volumes in this area.

A total of 28,570,243 MMBtu with a value of \$99,620,227 was invoiced during the pilot for all RIK gas. All base load sales accounted for 24,889,888 MMBtu or 87.11 per cent of the total. For the 11-month period (September 1999 – July 2000) base load sales from the MOPS package were 2,792,691 MMBtu. This was 11.22 per cent of the base load sales and 9.77 per cent of all sales. All base load sales had a value of \$84,109,338 (84.42 per cent). The MOPS package had total sales worth \$7,937,638. This was 9.44 per cent of the base load sales, and 7.97 per cent of all sales. Blessing swing volumes totaled 3,680,355 MMBtu (12.88 per cent of all volumes) with a value of \$15,510,889 (15.57 per cent of all revenues).

Value Comparison – Blessing Base load RIK Prices to Indices

The Blessing base load RIK value exceeded the average FOM index as published in *Inside FERC* in 13 of the 19 pilot period months. The RIK value exceeded the index value by a cumulative \$313,934, an uplift of 0.41 per cent over the average FOM index value. The total value of all Blessing base load RIK sales was \$76,171,700. Attachment 5 presents the results of this comparison.

Value Comparison – Blessing Swing RIK Prices to Index Prices

For the volumes sold as swing from the Blessing package, the appropriate comparison index is the Tennessee South – Corpus Christi daily midpoint index as published in *Platts Gas Daily*. The total volumes sold as swing from the Blessing package were 3,675,615 MMBtu. The RIK contract value of these volumes was \$15,510,889. The total value of the volumes had they been sold at the Tennessee South-Corpus Christi index would have been \$15,339,586. The RIK value exceeded the index value by \$170,720 or an increase of 1.1 per cent. Attachment 6 illustrates the price comparison for the Blessing swing sales.

Value Comparison – MOPS Base load RIK Prices to Indices

The average of *Inside FERC's* Florida Gas Transmission Zone 1 (FGT Z1), Koch (TX), and NGPL (S.TX) indices is appropriate for a comparison to MOPS RIK base load sales. The MOPS RIK sales for the period September 1999 to July 2000 totaled 2,792,691 MMBtu. The value of these sales was \$7,937,630. The value of the MOPS RIK volumes had they been sold at the FOM average index price would have been \$7,764,867. The

RIK value exceeds the index revenues by \$177,640, an increase of 2.24 per cent. Attachment 7 illustrates the RIK to index comparison⁵.

Value Comparison – Blessing RIK Prices (Base load & Swing) to Adjacent In-Value Prices

For the 19-month pilot period, the volume of all Blessing sales (base load and swing) was 25,772,812 MMBtu. The RIK contract value of those sales was \$91,682,589. The RIK contract value exceeded the cumulative adjacent in-value leases' value by \$906,635, an increase of 0.99 per cent. The RIK unit price was calculated using all revenues from both the base load and swing sales. This way, the RIK price represented a mixture of sales similar to the adjacent leases' in-value price. The RIK price exceeded the in-value price in 16 of the 19 months. An anomaly occurred in December 2000. The daily gas market in December 2000 experienced one of its most volatile periods in history with daily prices in some areas in excess of \$10.00/MMBtu. In December approximately one-third of the in-value production was sold at an average price that was \$1.25/MMBtu higher than the average price received by the lower third of production. The adjacent leases' value exceeded the RIK leases' value by \$1,220,771 in this month. If this last month is excluded, the RIK value would have exceeded the adjacent lease's value by an even greater amount. Without investigating the details of the sale from the in-value leases for this month, it appears that significant volumes were sold as swing on the daily market. For the MMS to have achieved similar results, it would have to have sold a greater share of its RIK volumes as swing, rather than as base load gas. However, the government's philosophy as a fiduciary of the public's resources results in a more conservative approach to selling the RIK gas on a first of month price and therefore not exposing potential royalties to significant price swings (either up or down) on the daily market. Attachment 8 compares the RIK prices to the adjacent leases' prices.

Value Comparison – MOPS Base load RIK Prices to In-Value Prices

The total value of all MOPS RIK base load sales for the pilot period was \$7,937,630. The value of the MOPS sales volumes valued using the adjacent leases' monthly volume weight average prices would have been \$7,846,736. The RIK value exceeds the adjacent leases' value by \$90,894, an increase of 1.15 per cent. Attachment 9 illustrates the comparison of the MOPS RIK package and adjacent in-value leases.

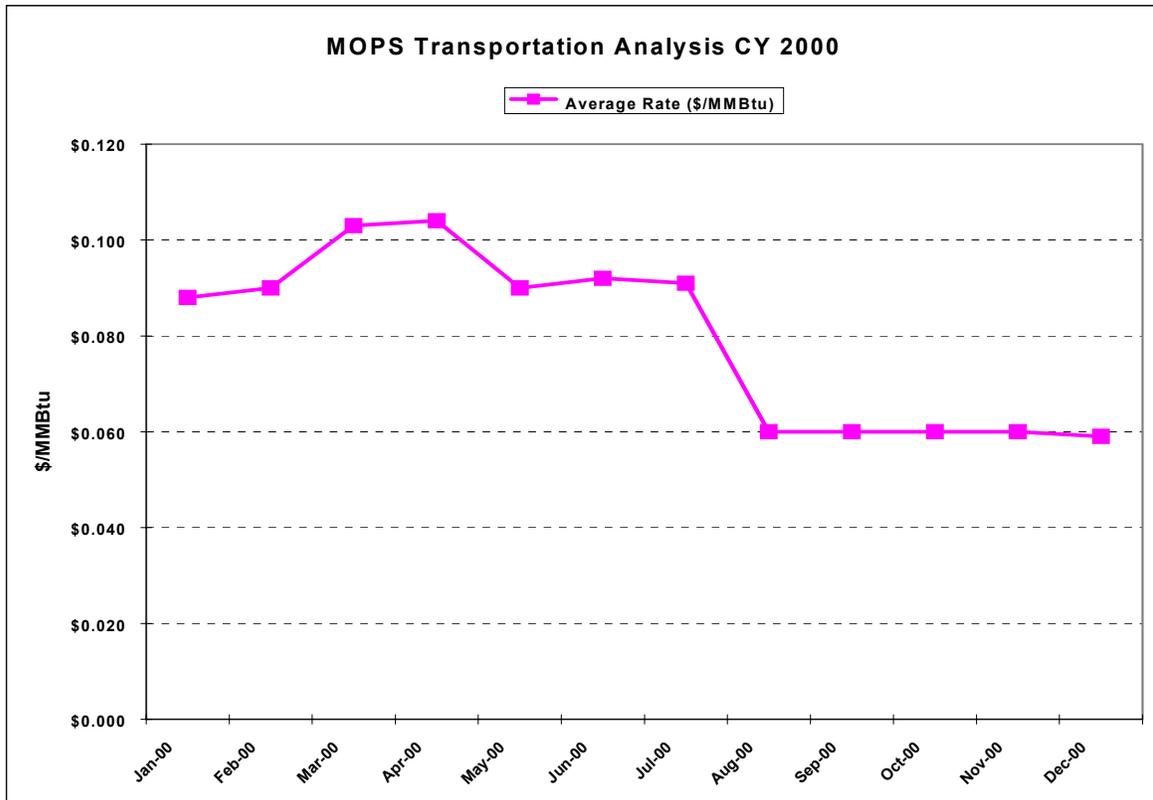
MOPS Transportation – Reported In-Value v. Contracted Under RIK

In June 1999, payors on the five MOPS pilot leases could claim transportation allowances in accordance with the valuation regulations. After operating the 8(g) pilot for over a year (11 months for the MOPS package) and performing an internal analysis, the MMS concluded that the opportunity to reduce transportation costs existed for the MOPS pilot

⁵ The most conservative comparison would be comparing the RIK prices to the highest of the three indices that were averaged. This would be the FGT Z1 index. For the pilot period, the FGT Z1 value exceeds the RIK index by \$4,877 (0.06 per cent). One must remember that not everyone sells at the FGT Z1 index, if they did, there would be no other valid indices at the market center.

leases. By expanding the number of leases offered for sale on the MOPS system to between 25 and 30 (including Federal OCS leases outside the 8(g) zone plus the five pilot leases) the MMS would be in a position to contract with the pipeline on a fixed transportation rate for all RIK volumes. Individual purchasers would be responsible for paying the MMS contract reduced transportation costs to the pipeline operator each month.

The MMS expanded the number of MOPS RIK properties in August 2000. From January 2000 to July 2000, the weighted-average transportation rate claimed by in-value royalty payors on the royalty report for all MOPS properties was between \$0.028 to \$0.044 per MMBtu greater than the contract rate negotiated for movement of RIK volumes beginning in August 2000. The approximate savings resulting from the negotiated transportation rate based on the last 5 months of CY 2000 are \$18,000 per month. The results are graphically presented below.



Modified Lines Savings

The number of original and modified royalty reporting lines was determined for each month from January 1997 to December 2000. For the 29-month period (January 1997 through May 1999) prior to the pilot, approximately 47 per cent of the reported lines were to correct previously submitted lines. For the pilot period (June 1999 through December 2000) this rate decreased to approximately 41 per cent. For the last 6 months of the pilot period (July 2000 through December 2000) the modified line rate was approximately 3.5 per cent. Apparently, once routine RIK processes are developed, the number of modified lines significantly drops.

Early Payment of Royalties Benefit

Payment requirements are part of the RIK contract. Currently, all payments for the RIK gas are received 5 days earlier than royalty payments are required under the in-value regulations. Using the MMS' standard late payment interest rate and the Blessing monthly sales, the MMS estimates \$103,000 was realized by selling gas production in kind during the pilot study period. During the pilot, this early payment requirement was not the case for the MOPS leases.

Audit Costs

Audit costs for the 8(g) gas production taken in kind during the evaluation period should be less than if royalties were paid in value. The audit process for RIK should be simpler, since one of the major components of the royalty equation – value – has been set by the RIK contract.

Appeals and Litigation

Administrative oversight and management of the valuation process add program costs for royalties paid in value. Valuation regulations must be promulgated. Additionally, processes and procedures must be developed and valuation determinations must be researched and developed. Typically disputes follow, causing years of uncertainty for the lessee and lessor. These disputes can lead to administrative appeals, district court litigation, and appeals court litigation. MMS has estimated the total actual costs of an average appeal to be \$7,500. By eliminating valuation disputes, RIK results in far fewer appeals.

**MINERALS MANAGEMENT SERVICE
OFFICE OF POLICY AND MANAGEMENT IMPROVEMENT**

1997 ROYALTY IN KIND FEASIBILITY STUDY

EXECUTIVE SUMMARY

This document presents results of a feasibility study concerning whether the U.S. Government should take its oil and gas royalties from Federal leases "in kind" rather than "in value."

The Minerals Management Service (MMS) performed the study as part of MMS's continuing examination of potential improvements to the Nation's mineral royalty management program. The study also responds to a congressional directive to consider royalty in kind (RIK) scenarios. Potential benefits of adopting RIK programs include: 1) eliminating contentious valuation disputes between producers and MMS; 2) increasing the certainty of accurate royalty payments; 3) decreasing administrative costs for both industry and MMS; and 4) maximizing potentials to increase Federal revenues.

The primary objective of the study is to determine if the implementation of an RIK program or programs for Federal oil and gas appears to be in the best interest of the United States, and, if so, under what circumstances.

Public Comment MMS conducted six workshops to obtain public comment on RIK feasibility. The primary public reaction to MMS's RIK options was widespread support for MMS to take oil/gas production in kind, a sentiment expressed by large and small producers, marketers, field service companies, pipeline companies, and State governments. Overall, public comment indicated that offshore gas RIK has more potential for revenue enhancement than does oil RIK. Public comment supported delivery of U.S. royalty production at the lease, with either lease sales or downstream sales by a contracted marketing agent as the best options. Both producers and marketers urged MMS to adopt bold programs (rather than "pilot projects") involving substantial volumes and time periods. Producers cited maximized administrative savings and marketers asserted revenue enhancements as the basis for their opinions.

Market Survey MMS conducted a survey of natural gas marketing companies to understand this aspect of the business and to determine implications and potentials for marketing of U.S. royalty gas production. The energy marketers provide three attributes that have positive implications for marketing of U.S. royalty gas: 1) knowledge and experience in swapping/trading multiple commodities; 2) efficiencies from moving large volumes; and 3) the full spectrum of value-added services. Each of these potentially increases revenues from gas production. The gas marketers each contend that MMS can enhance offshore gas revenues by strategic alliances with energy marketers similar to the recent joint ventures between major producers and gas marketers.

Conclusions and Recommendations The overall conclusion of the study is that RIK programs could be workable, revenue neutral or positive, and administratively more efficient for MMS and industry. Key elements of a successful Federal RIK strategy would include:

- Downstream Market Presence: To be revenue neutral/positive, an MMS RIK program must strategically participate in downstream services and value enhancements, most likely through contracting with energy marketers.
- Aggregation: Provision of substantial volumes could provide MMS and its marketing agent(s) with increased market opportunities primarily through assurance of supply.
- Administrative Relief: The greatest relief would accrue under a broadly-applied, multi-year program through decreased reporting to MMS and discontinuation of audits of the producers' shares.

However, RIK programs would have reduced chances for success if implemented under the following unfavorable conditions: 1) audits of the producers' shares; 2) legislation directing MMS to take in kind for all commodities in all areas or at the lessees' discretion; 3) acceptance of production at less than marketable condition; and 4) payment of above market rates for transportation on non-jurisdictional pipelines.

We specifically conclude that a natural gas RIK program in the Gulf of Mexico has the greatest chance of success of any potential MMS RIK initiative, especially if it involves substantial volumes; is long-term; engages one or several marketers; and provides a formula for MMS sharing in downstream value additions secured by MMS's energy marketer(s). Although detailed economic effects can not yet be determined, such an RIK program is anticipated to be both revenue positive and administratively more efficient for the many reasons described in this document. **Accordingly, we recommend implementing an RIK pilot program for Gulf of Mexico natural gas consistent with the key success factors described above.**

For crude oil RIK, the information is equivocal and the revenue and administrative implications are uncertain. However, there is significant interest on the part of producers, marketers, and the State of Wyoming in taking crude oil in kind from Federal leases in Wyoming. **Thus, we recommend that a small-scale crude oil RIK pilot - developed in concert with all affected parties - be instituted in Wyoming to test revenue and administrative effects.**

Similarly, the State of Texas has expressed a significant amount of interest in an RIK program for Outer Continental Shelf(OCS) 8(g) leases offshore from the State. **Consequently, because the potential for a successful OCS gas RIK program appears high, we recommend that MMS and Texas jointly explore the possibilities of RIK programs involving these properties.**

COOPERATIVE AGREEMENT
BETWEEN THE
MINERALS MANAGEMENT SERVICE, DEPARTMENT OF INTERIOR
AND THE
STATE OF TEXAS GENERAL LAND OFFICE

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AND THE
STATE OF TEXAS GENERAL LAND OFFICE

I. **BACKGROUND**

The Minerals Management Service (MMS) and Texas General Land Office (GLO) propose to enter into a Cooperative Agreement (Agreement) to conduct a Joint Royalty-In-Kind (RIK) Pilot Project (Pilot) in which MMS will take and sell U.S. royalty gas production from offshore Texas attributable to the Federal royalty share of gas from certain leases made subject to Section 8(g) of the Outer Continental Shelf Lands Act (OCSLA). The MMS and GLO are collectively referred to herein as the "Parties."

A. **PURPOSE OF THE AGREEMENT**

The purpose of this Agreement is to provide the principles, procedures, obligations, and responsibilities that the Parties will utilize to conduct the Pilot. The intent of the Agreement is to develop a partnership in which the Parties interests are concurrently fulfilled as the Pilot evolves. The overall purpose of the Pilot is to increase the royalty revenues of the Federal Government and State of Texas by taking natural gas royalties in-kind and marketing/selling the RIK volumes. Specific goals include:

- a. Testing methods of marketing/selling in-kind volumes;
- b. Testing methods of transporting in-kind volumes;
- c. Providing gas supply for internal customers;
- d. Increasing revenues while concurrently providing internal utility savings;
- e. Developing additional in-house gas marketing expertise;
- f. Investigating potential use of third-party energy marketing companies; and
- g. Examining the feasibility of using in-kind gas for conversion to electricity.

B. **OBJECTIVES AND INTERESTS**

The MMS and GLO will both provide expertise, resources, and management commitment in order to conduct the Pilot in a manner in which the interests of both Parties are fulfilled.

1. **Interests of the Federal Government**

- a. Increase revenues to the U.S. Treasury;
- b. Provide utility savings and gas supply to U.S. facilities;
- c. Investigate the success of various sales methods for RIK operations;
- d. Learn from the RIK expertise residing at GLO; and
- e. Assist Texas in their RIK programs.

2. Interests of the State of Texas

- a. Increase revenues from the State share of OCSLA 8(g) lease receipts;
- b. Increase revenues to the State Permanent School Fund;
- c. Provide utility savings/gas supply to State facilities and other public entities; and
- d. Assist the federal Government in their RIK programs.

II. SCOPE OF WORK

A. MAGNITUDE

The Pilot will commence with a subset of RIK production from 8(g) leases offshore Texas. The Parties anticipate that the leases and royalty volumes involved under this Agreement will increase as the project matures. All leases to be involved under this Agreement will be jointly Selected by the Parties. Concurrent with the term of this Agreement, the Parties may independently evaluate and test other opportunities for the marketing/sales of royalty natural gas.

B. CONCEPTS/METHODS TO BE TESTED

The MMS and GLO anticipate that a variety of methodologies to dispose of royalty gas volumes will be tested, including but not limited to the following:

- a. Marketing/sales of gas to State agencies or other public entities;
- b. Marketing/sales of gas to Federal Agencies, institutions, of facilities;
- c. Marketing/sales of gas to non-governmental entities;
- d. Marketing/sales of gas by utilizing marketing agents or consultants;
- e. Exchange of gas volumes to reduce transportation charges; and
- f. Exchange of gas to electricity and associated marketing/sales.

C. ROLES

1. Federal Government Roles

The Federal Government will perform and have primary responsibility for the following activities:

- a. Publish any Federal regulations needed;
- b. Obtain any necessary approvals within the MMS or other Federal agencies;
- c. Identify Federal natural gas purchasers;
- d. Collect and disburse RIK sales revenues;
- e. Place one MMS employee in GLO offices to assist in project operations;
- f. Provide computer access to gas index databases for MMS employee at GLO;
- g. Perform final approval and execution of all contracts;
- h. Serve as liaison with and respond to Federal oversight entities; and
- i. Prepare monthly status and other reports, as necessary, to MMS management.

Negotiation of sales contracts is a joint responsibility of both Parties; however, it is MMS' role for final approval and execution of all contracts. The GLO may also be involved in any or all of the above activities in an advisory role.

2. State of Texas Roles

The GLO, with the MMS employee participation in the Austin office, will perform and have primary responsibility for the following activities:

1. Provide market and transportation expertise/support for the Pilot;
2. Identify State end-user customers;
3. Collect data necessary to invoice customers and verify volumes;
4. Conduct primary negotiation of transportation contracts;
5. Nominate, schedule, ship, balance, and verify royalty volumes;
6. Invoice purchasers;
7. Submit electronic sales reports to MMS in Lakewood, Colorado.

The MMS may also be involved in any or all of the above activities in an advisory, concurrence, or approval role.

III. PERIODS OF PERFORMANCE

The period of performance of this Agreement shall be from November 1, 1998, through October 31, 2000. The period of performance may be extended upon the agreement of MMS and the GLO by modification issued by the Contracting Officer. This Agreement may be terminated by written notice of the intent to terminate, given no less than 60 days prior to termination.

IV. REPORTS

A. BUSINESS MANAGEMENT PLAN

Both the MMS and GLO shall adhere to the Business Management Plan attached as Exhibit A. The plan summarizes elements relating to the management of the Texas OCSLA 8(g) RIK gas marketing activities.

B. MONTHLY STATUS LETTERS

The MMS onsite employee at the GLO offices in Austin will prepare and submit monthly status letters to the MMS Project Officer and GLO Deputy Commissioner for Energy Resources as per the schedule below. The GLO Energy Resources Division shall furnish to the MMS onsite FTE such typing and secretarial support as may be required for the preparation of the monthly status reports.

The status letters as prepared by the MMS onsite FTE will be in sufficient detail to disclose all work accomplished and results achieved during the month and will include a brief discussion of the planned actions for the succeeding month. All problems encountered will be identified.

Their scheduling impacts, if any, and any actions taken to ameliorate them will be discussed in the monthly status letters. Upon request, the GLO's Energy Resources staff shall provide such information and documentation as is reasonably necessary for the MMS onsite FTE to prepare the monthly status reports.

C. FINAL REPORT (DRAFT)

The MMS onsite FTE will be responsible for the preparation and submission of the Final report (Draft). Upon request, the GLO shall cause its Energy Resources Division staff to provide such information, documentation, typing and secretarial support as is reasonably necessary for the MMS onsite FTE to prepare the draft of the Final Report.

Upon receipt of same, the GLO will have thirty (30) days to: (i) review the Draft Final Report as prepared by the MMS onsite FTE; and (ii) notify the MMS onsite FTE of any changes, corrections, and additions which the GLO believes should be made to the Final Draft Report. The draft Final Report, as prepared by the MMS onsite FTE and reviewed by the GLO, will then be submitted to the MMS Editorial Staff as per the schedule listed below.

D. FINAL REPORT (FINAL VERSION)

The MMS onsite FTE to the extent necessary will incorporate into the Final Report (final version) any revisions, corrections or additions made by the editorial staffs of the MMS and GLO. If there are any disagreements between the MMS and the GLO editorial staffs, the Final Report (final version) shall endeavor to report the dissimilar positions of the parties with respect to substantive and material matters.

The MMS onsite FTE will deliver two (2) unbound high-quality run master and additional copies of the Final Report (final version) to both the MMS and GLO as specified in the schedule below. This Final Report (final version) will be submitted in hard copy (paper) format as well as in a digital version (3 ½ inch diskette with IBM compatible WordPerfect file) as approved by MMS Project Officer and GLO Deputy Commissioner-Energy resources.

E. TECHNICAL SUMMARY (FINAL)

The MMS onsite FTE will incorporate into the Technical Summary (final version) the comments, recommendations, corrections, and suggestions of the editorial staffs of the MMS and/or GLO. If there are any disagreements between the MMS and GLO editorial staffs, the Technical Summary (Final version) shall endeavor to report the dissimilar positions of the parties with respect to any substantive and material matters. This Technical Summary (final version) will be submitted in hard copy (paper) format as well in a digital version (3 ½ inch diskette with IBM compatible WordPerfect file) as approved by the MMS Project Officer and GLO Deputy Commissioner-Energy Resources.

F. CORRESPONDENCE

All correspondence and reports pertaining to this Agreement as prepared by either the MMS onsite FTE or GLO Staff, will have copies (with attachments) sent to the MMS Project Officer,

GLO Deputy Commissioner-Energy Resources and GLO Manager-Energy Marketing, according to the schedule listed below. All correspondence and reports will be clearly marked on the first page so as to reference both the MMS Cooperative Agreement number and GLO Contract Number, as marked on the first page of this Agreement. The following schedule will be used:

Deliverable	Distribution	Due Date
A. Program Management Plan Updates	MMS Contracting Officer—1 copy MMS Project Officer—3 copies MMS FTE—1 copy GLO Deputy Commissioner, Energy—1 copy GLO Manager, Energy Marketing—3 copies	Promptly after any event is known which is expected to change any aspect of the approved plan.
B. Monthly Status Letters	MMS Contracting Officer—1 copy MMS Project Officer—3 copies MMS FTE—1 copy GLO Deputy Commissioner, Energy—1 copy GLO Manager, Energy Marketing—3 copies	On or before the 15 th day following the month to which the status letter applies.
C. Final Report (Draft)	MMS Contracting Officer—cover letter only MMS Project Officer—3 copies MMS FTE—1 copy GLO Deputy Commissioner, Energy—1 copy GLO Manager, Energy Marketing—3 copies	Within 10 days after the GLO Staff has received the draft Final Report and notified the MMS FTE of any changes, corrections and additions.
D. Final Report (Final Version)	MMS Contracting Officer—cover letter only MMS Project Officer—3 hard copies & 1 electronic copy MMS FTE—1 hard copy & 1 electronic copy GLO Deputy Commissioner, Energy—1 hard Copy GLO Manager, Energy Marketing—3 copies hard copies & 1 electronic copies	Within 30 days after the editorial staffs of both the MMS and GLO have completed their review of the draft Final report and provided their comments and any suggested revisions.
E. Correspondence	MMS Contracting Officer—1 copy MMS Project Officer—3 copies MMS FTE—1 copy GLO Deputy Commissioner, Energy—1 copy GLO Manager, Energy Marketing—1 copy	MMS or GLO originated correspondence, mailed on same day. Third-party originated Correspondence, with one week of receipt by the MMS or GLO, as applicable.

V. CONFLICT RESOLUTION

Any disputes between the Parties concerning the activities conducted under the Pilot will be initially addressed by the MMS Project Officer and GLO Deputy Commissioner for Energy Resources. Resolution from the MMS Director and Texas Land Commissioner will be sought, if needed.

VI. PROJECT OFFICERS

The MMS Project Officer for this Agreement is Gregory Smith (See address below). The MMS Project Officer will administer the technical aspects of this Agreement and inspect the GLO's work for compliance with the Program Management Plan and other requirements for the Pilot.

The GLO Manager of Energy Marketing is Dennis Miller (See address below). The GLO Manager, Energy Marketing will administer the technical aspects of this Agreement for the GLO and direct and inspect the work of the MMS onsite FTE with respect to the Pilot.

Both the MMS Project Officer and the GLO Manager of Energy Marketing shall manage the Pilot Activities and address the issues needing the joint attention of the Parties. In addition the MMS Director and Texas Land Commissioner will each designate an executive level point of contact to provide oversight and senior management policy direction and decision making.

Neither the MMS Project Officer nor the GLO Manager of Energy Marketing has any authority to modify the terms and conditions of this Agreement, including specifications, which may change the Agreement or period of performance. Any modifications, revisions or amendments to this Agreement shall not be binding except pursuant to a written instrument executed by both the MMS Director and the Texas Land Commissioner.

The addresses for key personnel are as follows:

MMS Project Officer:

Gregory Smith
Minerals Management Service
U.S. Department of the Interior
P.O. Box 3750
Denver, Colorado 80225-0165
Tel: (303) 275-7102
Fax: (303) 275-7124
E-mail: gregory.w.smith@mms.gov

GLO Manager, Energy Marketing

Dennis Miller
Energy Resources
Texas General Land office
Stephen F. Austin Bldg.
1700 North Congress Ave.
Austin, Texas 78701-1495
Tel: (512) 463-6999
Fax (512) 475-1404
E-mail: dmiller@glo.state.tx.us

MMS Contracting Officer

Michael Del-Colle
Procurement Operations Branch
Minerals Management Service
U.S. Department of the Interior
381 Elden Street, MS 2500
Herndon, Virginia 20170-4817
Tel: (703) 787-1373
Fax: (703) 787-1387
E-mail: Michael.Del-Colle@mms.gov

GLO Deputy Commissioner

Mr. Kerry Overton
Energy Resources
Texas General Land Office
Stephen F. Austin Bldg.
1700 North Congress Ave.
Austin, Texas 78701-1495
Tel: (512) 305-9629
fax: (512) 475-1543
E-mail: KOverton@GLO.State.TX.US

VII. ASSURANCES

Both the MMS and GLO hereby assure and certify that they will comply with applicable Federal and State of Texas regulations, policies, and guidelines. Nothing contained in this Agreement is intended to confer upon any person, governmental agency, or entity not a party hereto any rights, claims or benefits, or to otherwise apply the same. This Agreement shall never be construed so as to deprive the Parties, any official or employee of the United States or the State of Texas, of any sovereign, governmental, qualified, individual or other immunity at Federal and Texas law, all such immunities being expressly reserved.

This Agreement, including Exhibit A, constitutes the entire agreement of the Parties with respect to the Pilot. All prior understandings and arrangements are superseded. Each Party shall have access to examine all data and materials generated during the conduct of the Pilot.

In Witness whereof, both Parties have executed this Agreement, effective as of the last executed date below.

Texas General Land Office

Minerals Management Service

Original signed by Garry Mauro

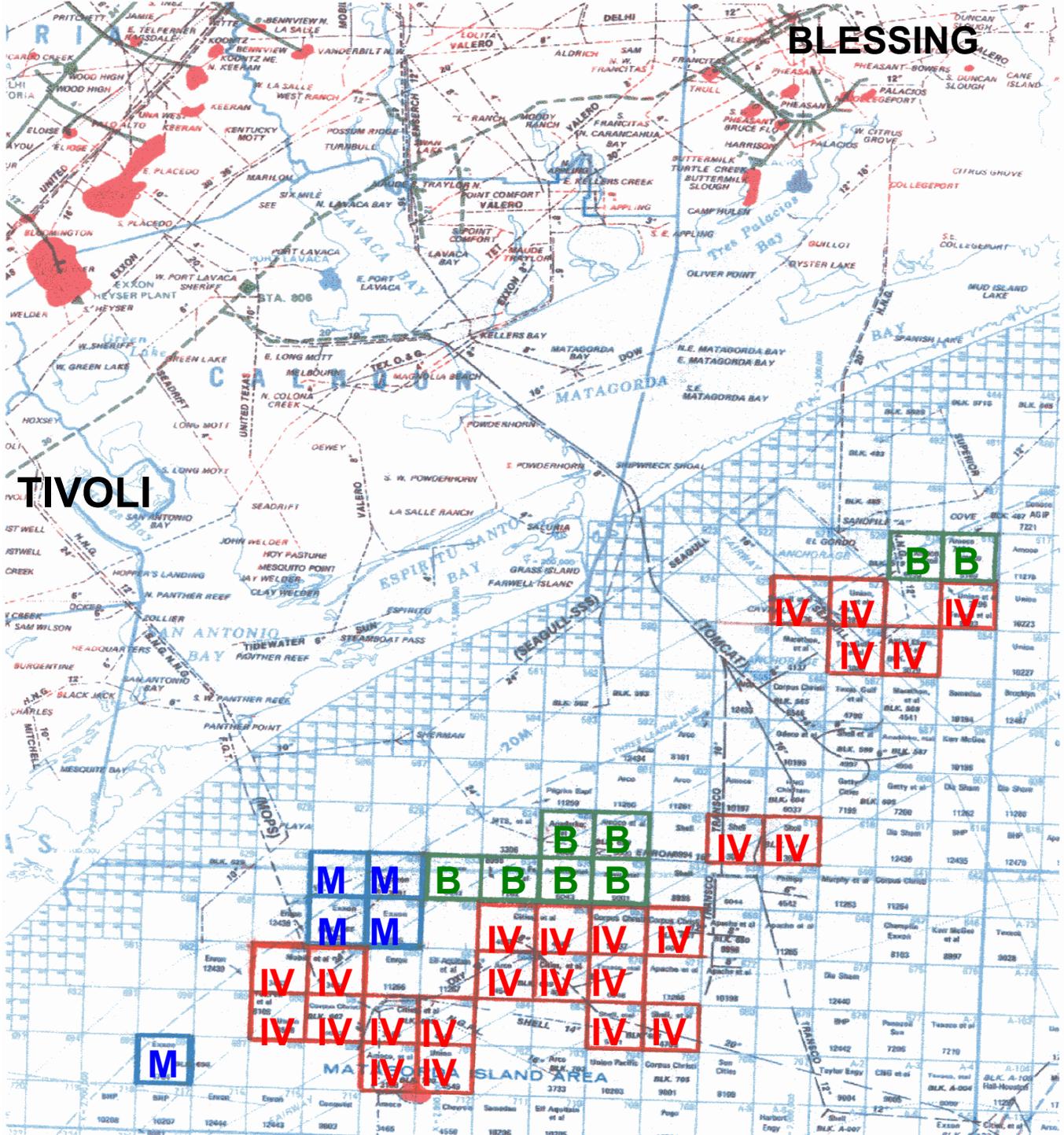
Original signed by C. Quarterman

Garry Mauro
Commissioner

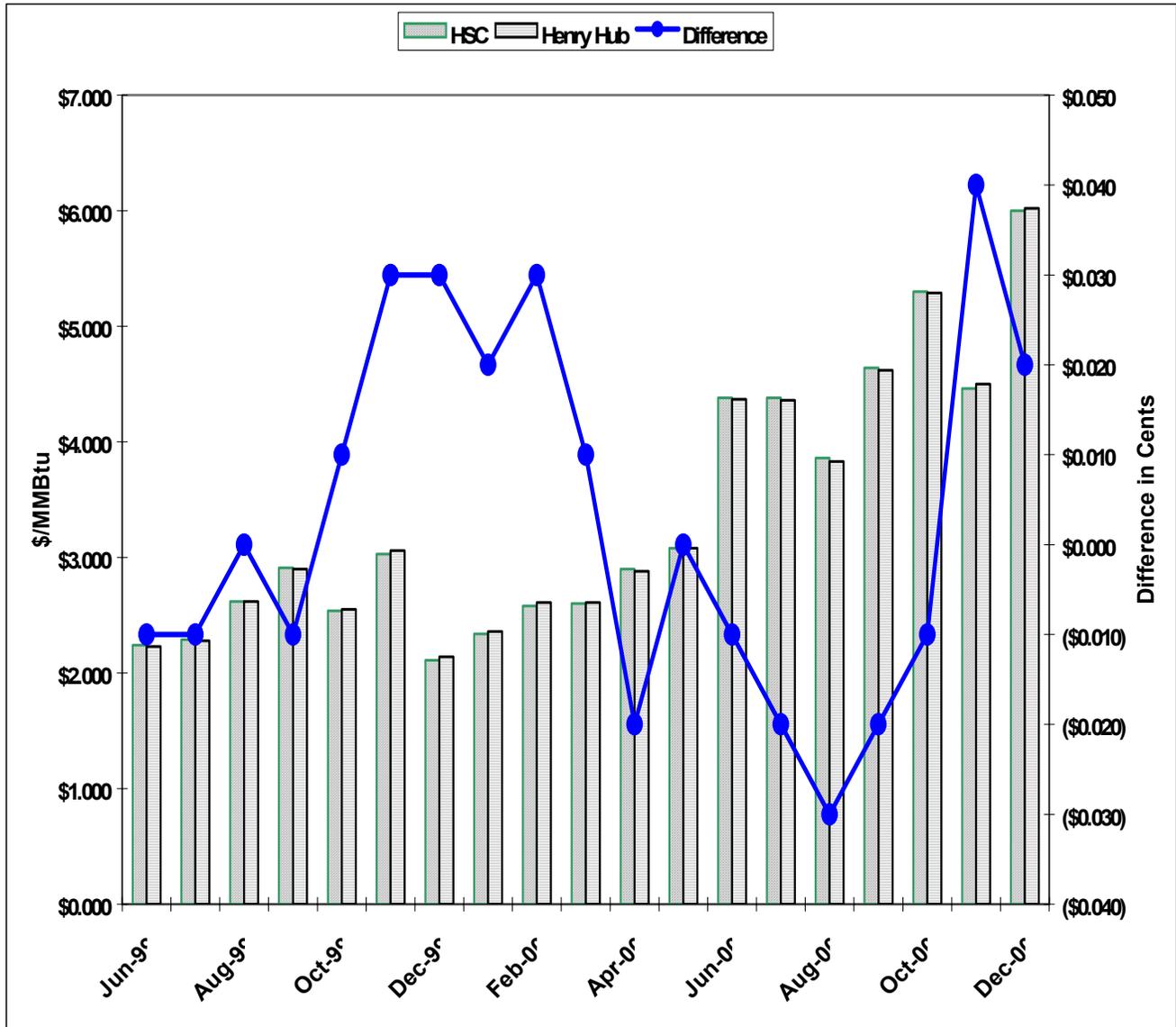
Cynthia Quarterman
Director

Original dated October 13, 1998
Dated: _____

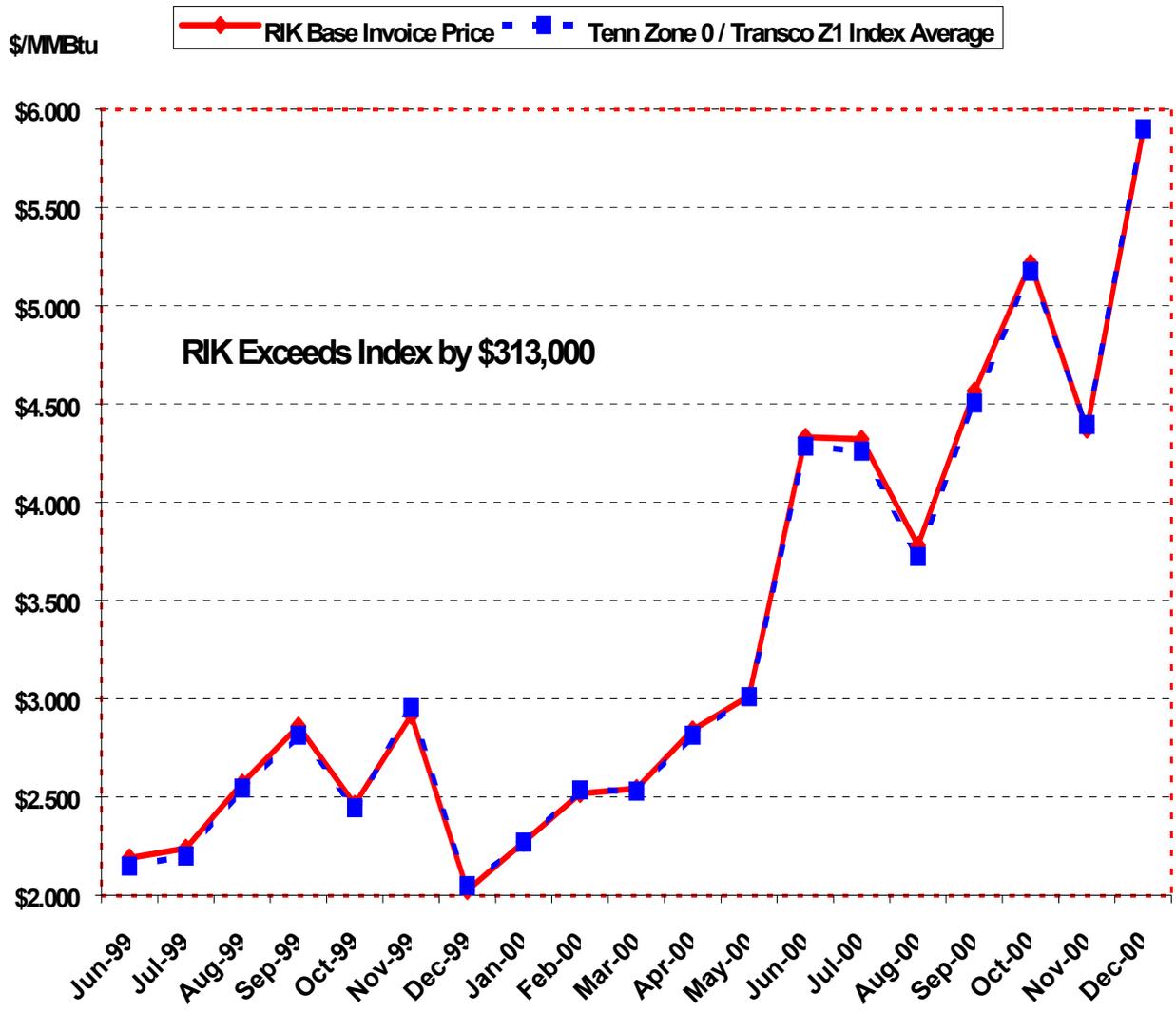
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Dated: _____



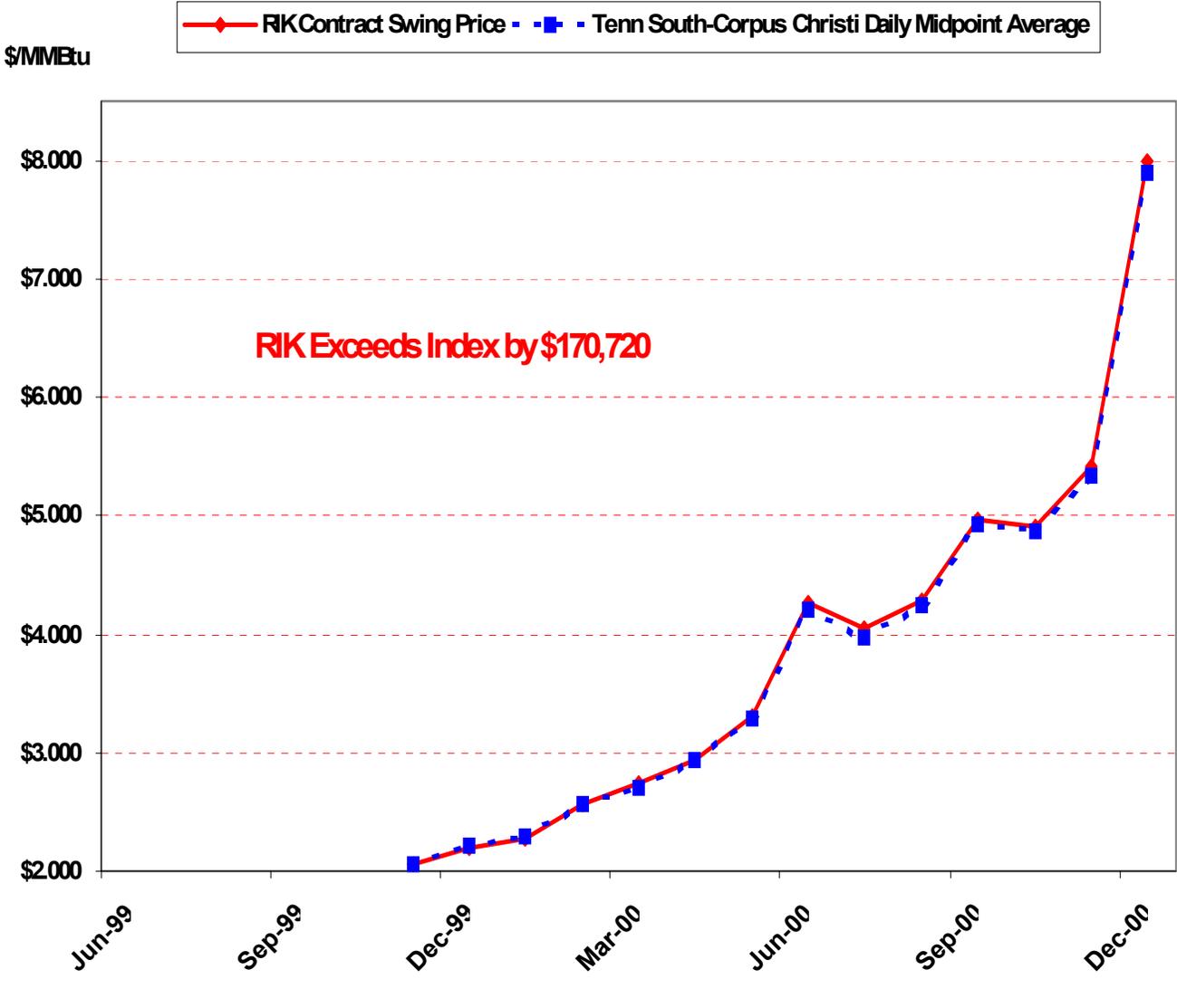
Map Courtesy Tennessee Gas Pipeline an El Paso Company

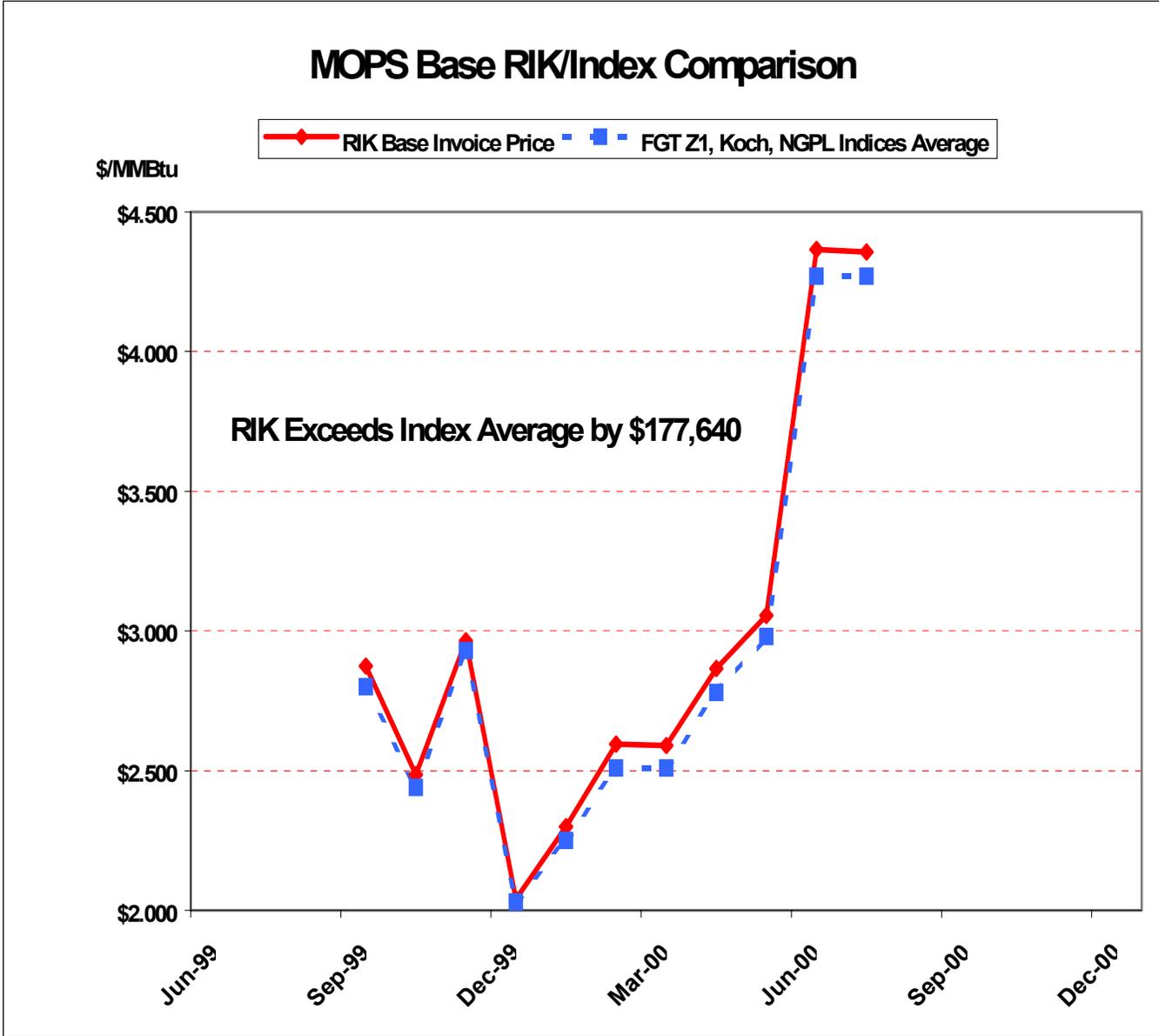


Blessing Base RIK/Index Comparison



Blessing Swing RIK/Index Comparison





Blessing RIK (Base & Swing)/Adjacent In Value Lease Comparison

